Supplementary Materials for:

Avian influenza viruses that cause highly virulent infections in humans exhibit distinct replicative properties in contrast to human H1N1 viruses

by

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Supplementary Figure S1 (4 pages)

The following 4 pages contain 2-dimensional histograms (contour plots) representing the posterior probability density functions for each of the 21 possible pairs of parameters, given the 7 parameters of the mathematical model (Eqn. 1), for each of the 4 influenza A viruses studied in this work (sH1N1, pH1N1, H5N1, H7N9).

The parameter short-hands used in the following 4 figure panels are as follows:

$$\beta = \text{b}$$

$$p_{\mathrm{RNA}} = \text{pr}$$

$$p_{\mathrm{TCID_{50},MC}} = \text{pinfmc}$$

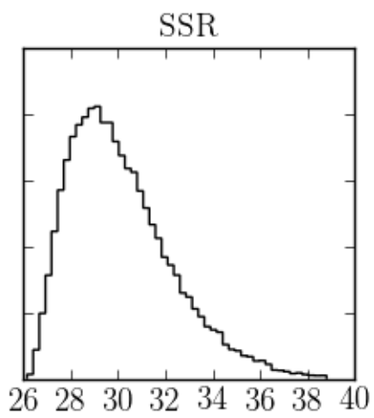
$$p_{\mathrm{TCID_{50},SC}} = \text{pinfsc}$$

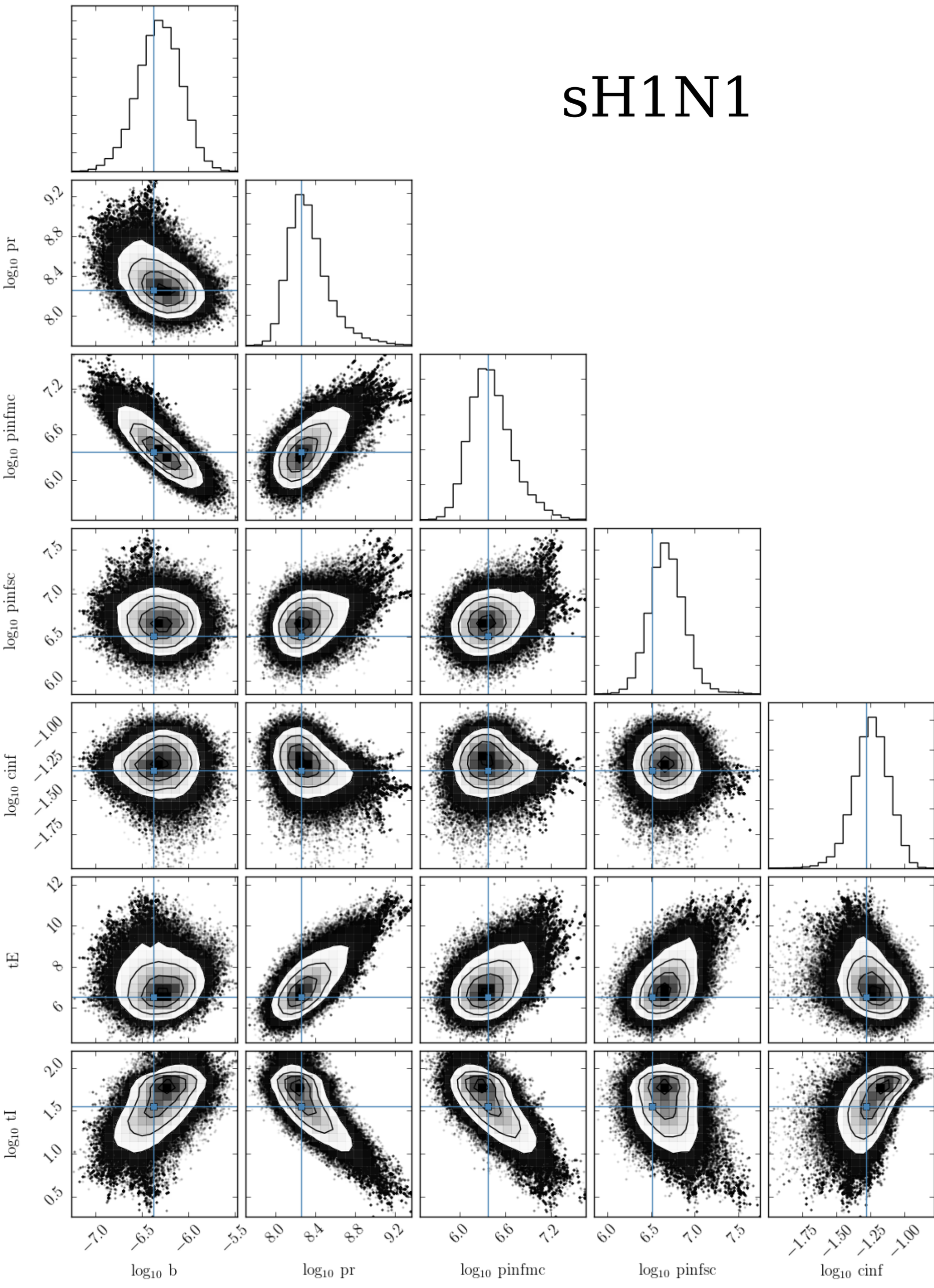
$$c_{\mathrm{TCID_{50}}} = \text{cinf}$$

$$\tau_E = \text{tE}$$

$$\tau_I = \text{tI}$$

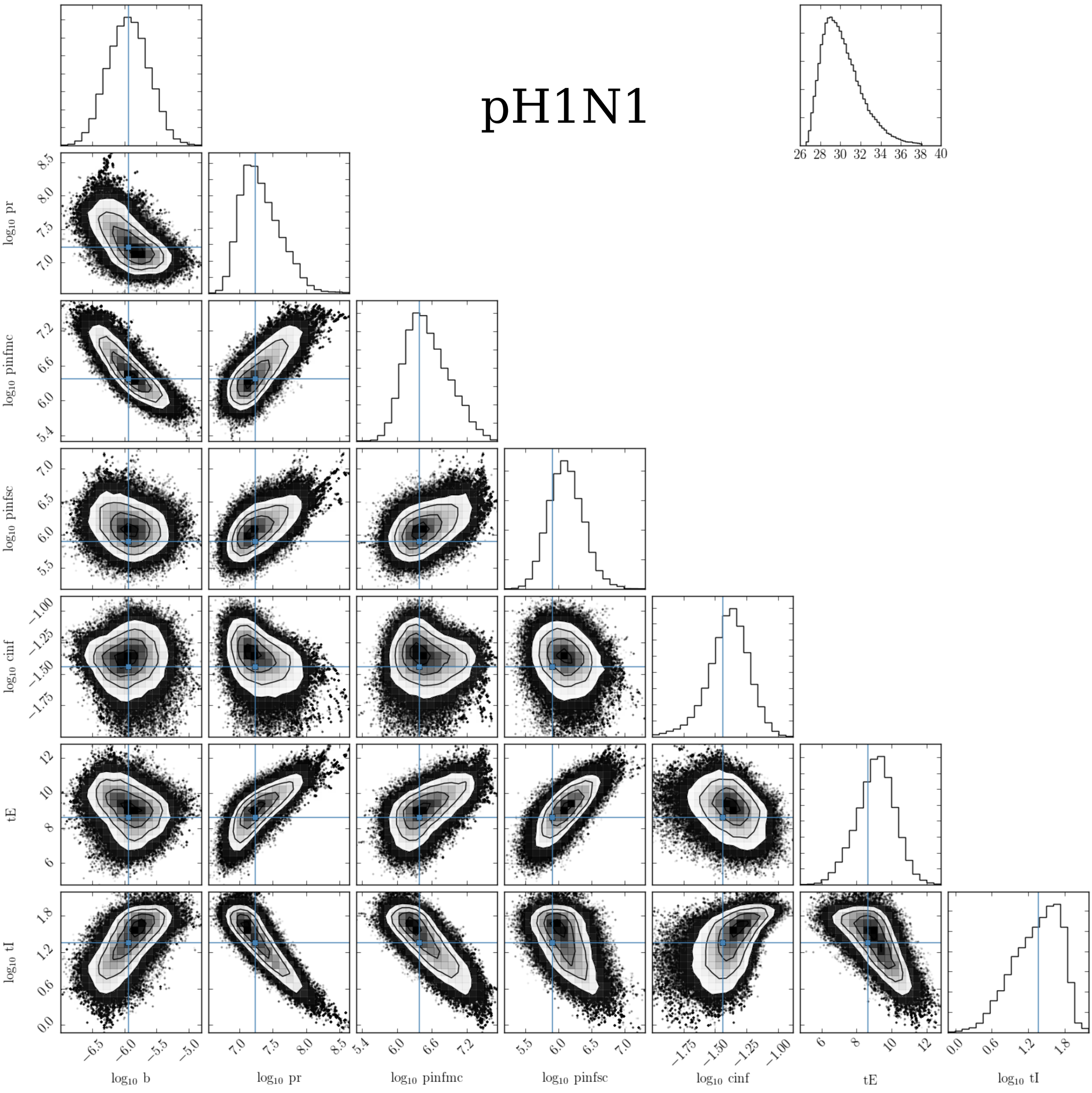
sH1N1


SSR
26 28 30 32 34 36 38 40


log10 b
log10 pr
log10 pinfmc
log10 pinfsc
log10 cinf
tE
log10 tI

pH1N1

SSR
26 28 30 32 34 36 38 40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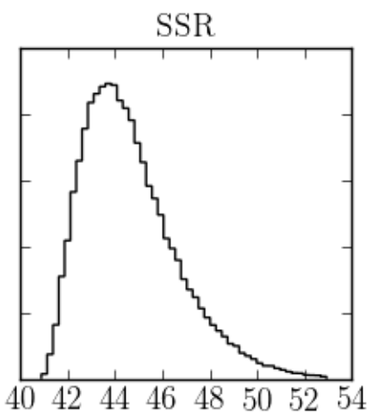
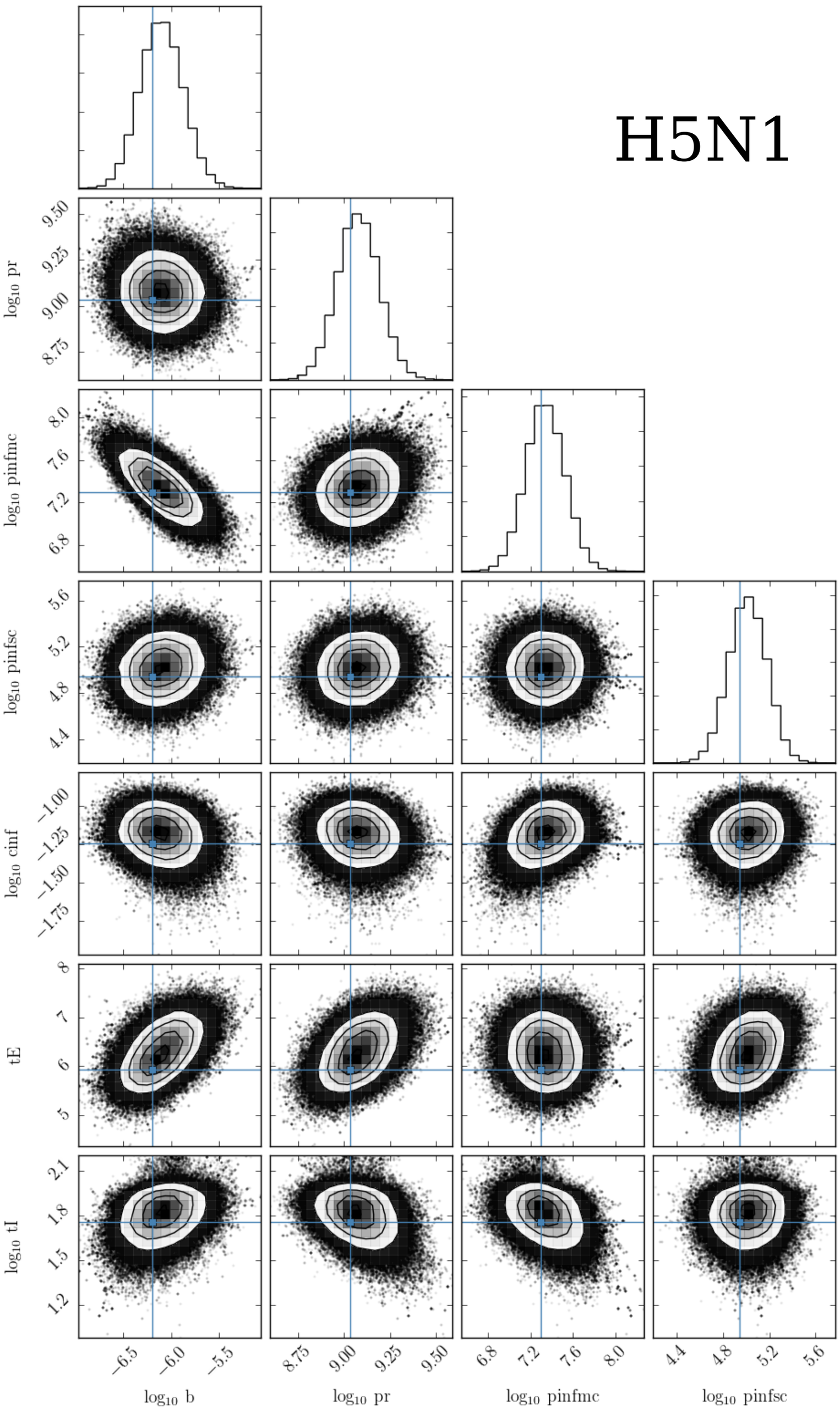
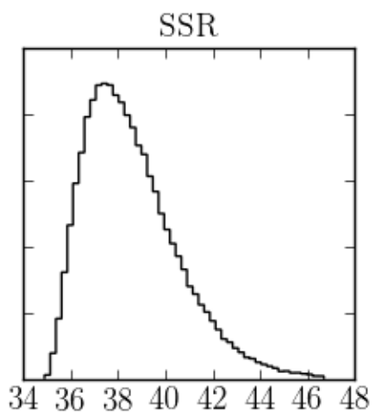
log10 pinfsc
log10 cinf
tE
log10 tI
log10 b
log10 pr
log10 pinfmc
log10 pinfsc
log10 cinf
tE
log10 tI

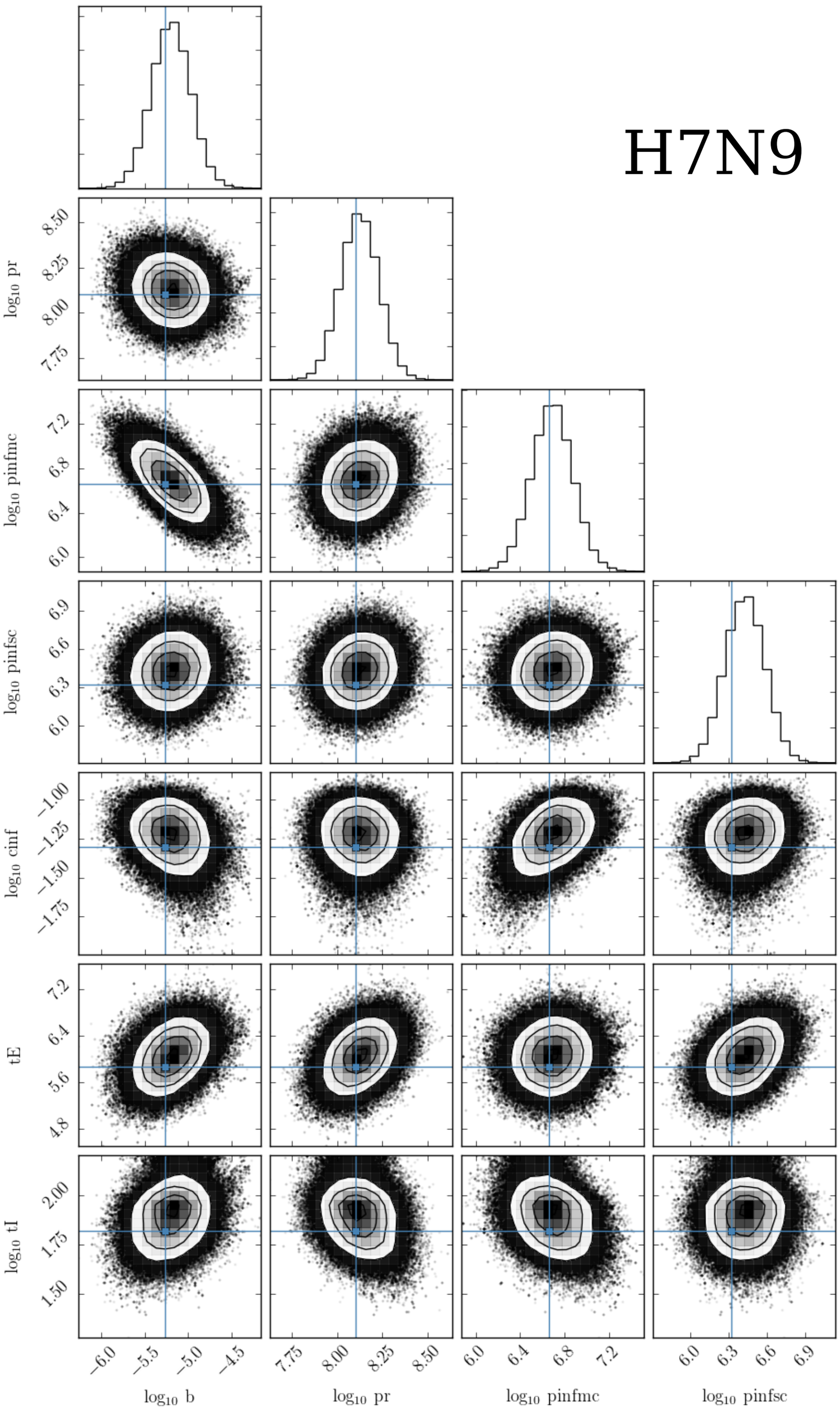
H5N1


SSR
40 42 44 46 48 50 52 54


log10 pr
log10 pinfmc
log10 pinfsc
log10 cinf
tE
log10 tI
log10 b
log10 pr
log10 pinfmc
log10 pinfsc
log10 cinf
tE
log10 tI

H7N9


SSR
34 36 38 40 42 44 46 48


log10 b
log10 pr
log10 pinfmc
log10 pinfsc
log10 cinf
tE
log10 tI
−6.0 −5.5 −5.0 −4.5
7.75 8.00 8.25 8.50
6.0 6.4 6.8 7.2
6.0 6.3 6.6 6.9
−1.00 −1.25 −1.50 −1.75
4.8 5.6 6.4 7.2
1.50 1.75 2.00